

WHAT IS CLAIMED IS:

1. A fluid ejector assembly, comprising:  
a heat sink attached to the container, the heat sink including a portion molded from a polymer having at least one thermally conductive filler material, the portion shaped to dissipate heat; and  
a fluid ejector module attached to the heat sink.
2. The fluid ejector assembly of claim 1, wherein the heat sink includes a plurality of fins extending out from the portion.
3. The fluid ejector assembly of claim 1, wherein materials used to form the heat sink and fluid ejector module have similar coefficients of thermal expansion.
4. The fluid ejector assembly of claim 1, wherein the polymer having at least one thermally conductive filler material has a thermal conductivity greater than about 10 W/m°C.
5. The fluid ejector assembly of claim 1, wherein the polymer having at least one thermally conductive filler material has a thermal conductivity less than about 100 W/m°C.
6. The fluid ejector assembly of claim 5, wherein the polymer having at least one thermally conductive filler material has a thermal conductivity of about 10 W/m°C to about 100 W/m°C.
7. The fluid ejector assembly of claim 1, wherein the at least one thermally conductive filler material is graphite.
8. The fluid ejector assembly of claim 7, wherein the graphite has been formed from a petroleum pitch base material.
9. The fluid ejector assembly of claim 1, wherein the at least one thermally conductive filler material is at least one ceramic material.
10. The fluid ejector assembly of claim 9, wherein the at least one ceramic material is at least one of boron nitride and aluminum nitride.
11. The fluid ejector assembly of claim 1, wherein the heat sink is chemically resistant to a fluid to be ejected by the fluid ejector module.
12. The fluid ejector assembly of claim 1, wherein the at least one thermally conductive filler material is oriented substantially parallel to an oriented flow area of the fluid ejector module.
13. The fluid ejector assembly of claim 1, wherein the heat sink further includes a container that stores a fluid to be ejected by the fluid ejector module.

14. The fluid ejector assembly of claim 1, further comprising a container that stores a fluid to be ejected by the fluid ejector module.

15. A method of manufacturing a fluid ejector assembly, comprising:  
molding a heat sink using a polymer material including at least one thermally conductive filler material, the molded heat sink having a portion shaped to dissipate heat; and

attaching the heat sink to at least one of a fluid ejector module and a container to form the fluid ejector assembly.

16. The method of claim 15, further comprising forming a plurality of fins extending out from the portion.

17. The method of claim 15, further comprising, prior to molding the heat sink, mixing at least one filler material having a thermal conductivity greater than about 10 W/m°C with the polymer.

18. The method of claim 15, further comprising, prior to molding the heat sink, mixing at least one filler material having a thermal conductivity less than about 100 W/m°C with the polymer.

19. The method of claim 18, wherein mixing at least one filler material has a thermal conductivity of about 10 W/m°C to about 100 W/m°C.

20. The method of claim 15, wherein molding the heat sink further includes orienting, during molding of the heat sink, the at least one filler material to be substantially parallel to an oriented flow area of the heat sink.

21. The method of claim 15, wherein:  
molding the heat sink comprises molding the heat sink integrally with the container; and

attaching the heat sink comprises attaching the heat sink and the integral container to the fluid ejector module to form the fluid ejector assembly.

22. The method of claim 15, wherein attaching the heat sink comprises attaching the heat sink to the fluid ejector module and the container to form the fluid ejector assembly.